Mink3a protein sequence

1 MGDPAPARSLDDIDLSALRDPAGIFELVEVVGNGTYGQVYKGRHVKTGQLAAIKVMDVTE
61 DEEEEIKQEINMLKKYSHHRNIATYYGAFIKKSPPGNDDQLWLVMEFCGAGSVTDLVKNT
121 KGNALKEDCIAYICREILRGLAHLHAHKVIHRDIKGQNVLLTENAEVKLVDFGVSAQLDR
181 TVGRRNTFIGTPYWMAPEVIACDENPDATYDYRSDIWSLGITAIEMAEGAPPLCDMHPMR
241 ALFLIPRNPPPRLKSKKWSKKFIDFIDTCLIKTYLSRPPTEQLLKFPFIRDQPTERQVRI
301 QLKDHIDRSRKKRGEKEETEYEYSGSEEEDDSHGEEGEPSSIMNVPGESTLRREFLRLQQ
361 ENKSNSEALKQQQQLQQQQRDPEAHIKHLLHQRQRRIEEQKEERRRVEEQQRREREQRK
421 LQEKEQQRRLEDMQALRREEERRQAEREQEYKRKQLEEQRQSERLQRQLQQEHAYLKSLQ
481 QQQQQQLQKQQQQLLPGDRKPLYHYGRGMNPADKPAWAREVEERTRMNKQQNSPLAKS
541 KPGSTGPEPPIPQASPGPPGPLSQTPPMQRPVEPQEGPHKSLQDQPTRNLAAFPASHDPD
601 PAIPAPTATPSARGAVIRQNSDPTSEGPGPSPNPPAWVRPDNEAPPKVPQRTSSIATALN
661 TSGAGGSRPAQAVRARPRSNSAWQIYLQRRAERGTPKPPGPPAQPPGPPNASSNPDLRRS
721 DPGWERSDSVLPASHGHLPQAGSLERNRVGASSKLDSSPVLSPGNKAKPDDHRSRPGRPA
781 DFVLLKERTLDEAPRPPKKAMDYSSSSEEVESSEDDEEEGEGGPAEGSRDTPGGRSDGDT
841 DSVSTMVVHDVEEITGTQPPYGGGTMVVQRTPEEERNLLHADSNGYTNLPDVVQPSHSPT
901 ENSKGQSPPSKDGSGDYQSRGLVKAPGKSSFTMFVDLGIYQPGGSGDSIPITALVGGEGT
961 RLDQLQYDVRKGSVVNVNPTNTRAHSETPEIRKYKKRFNSEILCAALWGVNLLVGTENGL
1021 MLLDRSGQGKVYGLIGRRRFQQMDVLEGLNLLITISGKRNKLRVYYLSWLRNKILHNDPE
1081 VEKKQGWTTVGDMEGCGHYRVVKYERIKFLVIALKSSVEVYAWAPKPYHKFMAFKSFADL
1141 PHRPLLVDLTVEEGQRLKVIYGSSAGFHAVDVDSGNSYDIYIPVHIQSQITPHAIIFLPN
1201 TDGMEMLLCYEDEGVYVNTYGRIIKDVVLQWGEMPTSVAYICSNQIMGWGEKAIEIRSVE
1261 TGHLDGVFMHKRAQRLKFLCERNDKVFFASVRSGGSSQVYFMTLNRNCIMNW

Mink3a nucleotide sequence

GCCCTTATGGGCGACCCAGCCCCCGCCCGC
AGCCTGGACGACATCGACCTGTCCGCCCTGCGGGACCCTGCTGGGATCTTTGAGCTTGTG
GAGGTGGTCGGCAATGGAACCTACGGACAGGTGTACAAGGGTCGGCATGTCAAGACGGGG
CAGCTGGCTGCCATCAAGGTCATGGATGTCACGGAGGACGAGGAGGAAGAGATCAAACAG
GAGATCAACATGCTGAAAAAGTACTCTCACCACCGCAACATCGCCACCTACTACGGAGCC
TTCATCAAGAAGAGCCCCCCGGGAAACGATGACCAGCTCTGGCTGGTGATGGAGTTCTGT
GGTGCTGGTTCAGTGACTGACCTGGTAAAGAACACAAAAGGCAACGCCCTGAAGGAGGAC
TGTATCGCCTATATCTGCAGGGAGATCCTCAGGGGTCTGGCCCATCTCCATGCCCACAAG
GTGATCCATCGAGACATCAAGGGGCAGAATGTGCTGCTGACAGAGAATGCTGAGGTCAAG
CTAGTGGATTTTGGGGTGAGTGCTCAGCTGGACCGCACCGTGGGCAGACGGAACACTTTC
ATTGGGACTCCCTACTGGATGGCTCCAGAGGTCATCGCCTGTGATGAGAACCCTGATGCC
ACCTATGATTACAGGAGTGATATTTGGTCTCTAGGAATCACAGCCATCGAGATGGCAGAG
GGAGCCCCCCCTCTGTGTGACATGCACCCCATGCGAGCCCTCTTCCTCATTCCTCGGAAC
CCTCCGCCCAGGCTCAAGTCCAAGAAGTGGTCTAAGAAGTTCATTGACTTCATTGACACA
TGTCTCATCAAGACTTACCTGAGCCGCCCACCCACGGAGCAGCTACTGAAGTTTCCCTTC
ATCCGGGACCAGCCCACGGAGCGGCAGGTCCGCATCCAGCTTAAGGACCACATTGACCGA
TCCCGGAAGAAGCGGGGTGAGAAAGAGGAGACAGAATATGAGTACAGCGGCAGCGAGGAG
GAAGATGACAGCCATGGAGAGGAAGGAGAGCCAAGCTCCATCATGAACGTGCCTGGAGAG
TCGACTCTACGCCGGGAGTTTCTCCGGCTCCAGCAGGAAAATAAGAGCAACTCAGAGGCT
TTAAAACAGCAGCAGCAGCTGCAGCAGCAGCAGCAGCGAGACCCCGAGGCACACATCAAA
CACCTGCTGCACCAGCGGCAGCGGCGCATAGAGGAGCAGAAGGAGGAGCGGCGCCGCGTG
GAGGAGCAACAGCGGCGGGAGCGGGAGCAGCGGAAGCTGCAGGAGAAGGAGCAGCAGCGG
CGGCTGGAGGACATGCAGGCTCTGCGGCGGGAGGAGGAGCGGCGGCAGGCGGAGCGTGAG
CAGGAATACAAGCGGAAGCAGCTGGAGGAGCAGCGGCAGTCAGAACGTCTCCAGAGGCAG
CTGCAGCAGGAGCATGCCTACCTCAAGTCCCTGCAGCAGCAGCAACAGCAGCAGCAGCTT
CAGAAACAGCAGCAGCAGCAGCTCCTGCCTGGGGACAGGAAGCCCCTGTACCATTATGGT
CGGGGCATGAATCCCGCTGACAAACCAGCCTGGGCCCGAGAGGTAGAAGAGAGAACAAGG
ATGAACAAGCAGCAGAACTCTCCCTTGGCCAAGAGCAAGCCAGGCAGCACGGGGCCTGAG
CCCCCCATCCCCCAGGCCTCCCCAGGGCCCCCAGGACCCCTTTCCCAGACTCCTCCTATG
CAGAGGCCGGTGGAGCCCCAGGAGGGACCGCACAAGTCCCTGCAGGACCAGCCCACCCGA
AACCTGGCTGCCTTCCCAGCCTCCCATGACCCCGACCCTGCCATCCCCGCACCCACTGCC
ACGCCCAGTGCCCGAGGAGCTGTCATCCGCCAGAATTCAGACCCCACCTCTGAAGGACCT
GGCCCCAGCCCGAATCCCCCAGCCTGGGTCCGCCCAGATAACGAGGCCCCACCCAAGGTG
CCTCAGAGGACCTCATCTATCGCCACTGCCCTTAACACCAGTGGGGCCGGAGGGTCCCGG
CCAGCCCAGGCAGTCCGTGCCAGACCTCGCAGCAACTCCGCCTGGCAAATCTATCTGCAA
AGGCGGGCAGAGCGGGGCACCCCAAAGCCTCCAGGGCCCCCTGCTCAGCCCCCTGGCCCG
CCCAACGCCTCTAGTAACCCCGACCTCAGGAGGAGCGACCCTGGCTGGGAACGCTCGGAC
AGCGTCCTTCCAGCCTCTCACGGGCACCTCCCCCAGGCTGGCTCACTGGAGCGGAACCGC
GTGGGAGCCTCCTCCAAACTGGACAGCTCCCCTGTGCTCTCCCCTGGGAATAAAGCCAAG

Fig. 1

Sheet 1

CCCGACGACCACCGCTCACGGCCAGGCCGGCCCGCAGACTTTGTGTTGCTGAAAGAGCGG
ACTCTGGACGAGGCCCCTCGGCCTCCCAAGAAGGCCATGGACTACTCGTCGTCCAGCGAG
GAGGTGGAAAGCAGTGAGGACGACGAGGAGGAAGGCGAAGGCGGGCCAGCAGAGGGGAGC
AGAGATACCCCTGGGGGCCGCAGCGATGGGGATACAGACAGCGTCAGCACCATGGTGGTC
CACGACGTCGAGGAGATCACCGGGACCCAGCCCCCATACGGGGGCGGCACCATGGTGGTC
CAGCGCACCCCTGAAGAGGAGCGGAACCTGCTGCATGCTGACAGCAATGGGTACACAAAC
CTGCCTGACGTGGTCCAGCCCAGCCACTCACCCACCGAGAACAGCAAAGGCCAAAGCCCA
CCCTCGAAGGATGGGAGTGGTGACTACCAGTCTCGTGGGCTGGTAAAGGCCCCTGGCAAG
AGCTCGTTCACGATGTTTGTGGATCTAGGGATCTACCAGCCTGGAGGCAGTGGGGACAGC
ATCCCCATCACAGCCCTAGTGGGTGGAGAGGGCACTCGGCTCGACCAGCTGCAGTACGAC
GTGAGGAAGGGTTCTGTGGTCAACGTGAATCCCACCAACACCCGGGCCCACAGTGAGACC
CCTGAGATCCGGAAGTACAAGAAGCGATTCAACTCCGAGATCCTCTGTGCAGCCCTTTGG
GGGGTCAACCTGCTGGTGGGCACGGAGAACGGGCTGATGTTGCTGGACCGAAGTGGGCAG
GGCAAGGTGTATGGACTCATTGGGCGGCGACGCTTCCAGCAGATGGATGTGCTGGAGGGG
CTCAACCTGCTCATCACCATCTCAGGGAAAAGGAACAAACTGCGGGTGTATTACCTGTCC
TGGCTCCGGAACAAGATTCTGCACAATGACCCAGAAGTGGAGAAGAAGCAGGGCTGGACC
ACCGTGGGGGACATGGAGGGCTGCGGGCACTACCGTGTTGTGAAATACGAGCGGATTAAG
TTCCTGGTCATCGCCCTCAAGAGCTCCGTGGAGGTGTATGCCTGGGCCCCCAAACCCTAC
CACAAATTCATGGCCTTCAAGTCCTTTGCCGACCTCCCCCACCGCCCTCTGCTGGTCGAC
CTGACAGTAGAGGAGGGGCAGCGGCTCAAGGTCATCTATGGCTCCAGTGCTGGCTTCCAT
GCTGTGGATGTCGACTCGGGGAACAGCTATGACATCTACATCCCTGTGCACATCCAGAGC
CAGATCACGCCCCATGCCATCATCTTCCTCCCCAACACCGACGGCATGGAGATGCTGCTG
TGCTACGAGGACGAGGGTGTCTACGTCAACACGTACGGGCGCATCATTAAGGATGTGGTG
CTGCAGTGGGGGGAGATGCCTACTTCTGTGGCCTACATCTGCTCCAACCAGATAATGGGC
TGGGGTGAGAAAGCCATTGAGATCCGCTCTGTGGAGACGGGCCACCTCGACGGGGTCTTC
ATGCACAAACGAGCTCAGAGGCTCAAGTTCCTGTGTGAGCGGAATGACAAGGTGTTTTTT
GCCTCAGTCCGCTCTGGGGGCAGCAGCCAAGTTTACTTCATGACTCTGAACCGTAACTGC
ATCATGAACTGGTGAAAGGGC

Mink3b protein sequence

1 MDVTEDEEEEIKQEINMLKKYSHHRNIATYYGAFIKKSPPGNDDQLWLVMEFCGAGSVTD
61 LVKNTKGNALKEDCIAYICREILRGLAHLHAHKVIHRDIKGQNVLLTENAEVKLVDFGVS
121 AQLDRTVGRRNTFIGTPYWMAPEVIACDENPDATYDYRSDIWSLGITAIEMAEGAPPLCD
181 MHPMRALFLIPRNPPPRLKSKKWSKKFIDFIDTCLIKTYLSRPPTEQLLKFPFIRDQPTE
241 RQVRIQLKDHIDRSRKKRGEKEETEYEYSGSEEEDDSHGEEGEPSSIMNVPGESTLRREF
301 LRLQQENKSNSEALKQQQQLQQQQQRDPEAHIKHLLHQRQRRIEEQKEERRRVEEQQRRE
361 REQRKLQEKEQQRRLEDMQALRREEERRQAEREQEYKRKQLEEQRQSERLQRQLQQEHAY
421 LKSLQQQQQQQLQKQQQQQLLPGDRKPLYHYGRGMNPADKPAWAREVEERTRMNKQQNS
481 PLAKSKPGSTGPEPPIPQASPGPPGPLSQTPPMQRPVEPQEGPHKSLVAHRVPLKPYAAP
541 VPRSQSLQDQPTRNLAAFPASHDPDPAIPAPTATPSARGAVIRQNSDPTSEGPGPSPNPP
601 AWVRPDNEAPPKVPQRTSSIATALNTSGAGGSRPAQAVRARPRSNSAWQIYLQRRAERGT
661 PKPPGPPAQPPGPPNASSNPDLRRSDPGWERSDSVLPASHGHLPQAGSLERNRVGASSKL
721 DSSPVLSPGNKAKPDDHRSRPGRPAVSHLVAGMACLILVWGLASGCWVSGVGSPLIYREG
781 LWGWRDWCFSWC

Mink3b nucleotide sequence

GCCCTT
ACCATTCTGGAAGCTCCCTAGAATCTCCTGGAATGCTTAATGGACCTTTCCAGCACCGAA
ATTCAAGAATTATGACTCATCGGTCAGCAGAAAAGACCCTGCTGGGATCTTTGAGCTTGT
GGAGGTGGTCGGCAATGGAACCTACGGACAGGTGTACAAGGGTCGGCATGTCAAGACGGG
GCAGCTGGCTGCCATCAAGGTCATGGATGTCACGGAGGACGAGGAGGAAGAGATCAAACA
GGAGATCAACATGCTGAAAAAGTACTCTCACCACCGCAACATCGCCACCTACTACGGAGC
CTTGATCAAGAAGAGCCCCCCGGGAAACGATGACCAGCTCTGGCTGGTGATGGAGTTCTG
TGGTGCTGGTTCAGTGACTGACCTGGTAAAGAACACAAAAGGCAACGCCCTGAAGGAGGA
CTGTATCGCCTATATCTGCAGGGAGATCCTCAGGGGTCTGGCCCATCTCCATGCCCACAA
GGTGATCCATCGAGACATCAAGGGGCAGAATGTGCTGCTGACAGAGAATGCTGAGGTCAA
GCTAGTGGATTTTGGGGTGAGTGCTCAGCTGGACCGCACCGTGGGCAGACGGAACACTTT
CATTGGGACTCCCTACTGGATGGCTCCAGAGGTCATCGCCTGTGATGAGAACCCTGATGC
CACCTATGATTACAGGAGTGATATTTGGTCTCTAGGAATCACAGCCATCGAGATGGCAGA
GGGAGCCCCCCCTCTGTGTGACATGCACCCCATGCGAGCCCTCTTCCTCATTCCTCGGAA
CCCTCCGCCCAGGCTCAAGTCCAAGAAGTGGTCTAAGAAGTTCATTGACTTCATTGACAC
ATGTCTCATCAAGACTTACCTGAGCCGCCCACCCACGGAGCAGCTACTGAAGTTTCCCTT
CATCCGGGACCAGCCCACGGAGCGGCAGGTCCGCATCCAGCTTAAGGACCACATTGACCG
ATCCCGGAAGAAGCGGGGTGAGAAAGAGGAGACAGAATATGAGTACAGCGGCAGCGAGGA

Fig. 1
Sheet 2

GGAAGATGACAGCCATGGAGAGGAAGGAGAGCCAAGCTCCATCATGAACGTGCCTGGAGA
GTCGACTCTACGCCGGGAGTTTCTCCGGCTCCAGCAGGAAAATAAGAGCAACTCAGAGGC
TTTAAAACAGCAGCAGCAGCTGCAGCAGCAGCAGCAGCGAGACCCCGAGGCACACATCAA
ACACCTGCTGCACCAGCGGCAGCGGCGCATAGAGGAGCAGAAGGAGGAGCGGCGCCGCGT
GGAGGAGCAACAGCGGCGGGAGCGGGAGCAGCGGAAGCTGCAGGAGAAGGAGCAGCAGCG
GCGGCTGGAGGACATGCAGGCTCTGCGGCGGGAGGAGGAGCGGCGGCAGGCGGAGCGTGA
GCAGGAATACAAGCGGAAGCAGCTGGAGGAGCAGCGGCAGTCAGAACGTCTCCAGAGGCA
GCTGCAGCAGGAGCATGCCTACCTCAAGTCCCTGCAGCAGCAGCAACAGCAGCAGCAGCT
TCAGAAACAGCAGCAGCAGCAGCTCCTGCCTGGGGACAGGAAGCCCCTGTACCATTATGG
TCGGGGCATGAATCCCGCTGACAAACCAGCCTGGGCCCGAGAGGTAGAAGAGAGAACAAG
GATGAACAAGCAGCAGAACTCTCCCTTGGCCAAGAGCAAGCCAGGCAGCACGGGGCCTGA
GCCCCCCATCCCCCAGGCCTCCCCAGGGCCCCCAGGACCCCTTTCCCAGACTCCTCCTAT
GCAGAGGCCGGTGGAGCCCCAGGAGGGACCGCACAAGAGCCTGGTGGCACACCGGGTCCC
ACTGAAGCCATATGCAGCACCTGTACCCCGATCCCAGTCCCTGCAGGACCAGCCCACCCG
AAACCTGGCTGCCTTCCCAGCCTCCCATGACCCCGACCCTGCCATCCCCGCACCCACTGC
CACGCCCAGTGCCCGAGGAGCTGTCATCCGCCAGAATTCAGACCCCACCTCTGAAGGACC
TGGCCCCAGCCCGAATCCCCCAGCCTGGGTCCGCCCAGATAACGAGGCCCCACCCAAGGT
GCCTCAGAGGACCTCATCTATCGCCACTGCCCTTAACACCAGTGGGGCCGGAGGGTCCCG
GCCAGCCCAGGCAGTCCGTGCCAGACCTCGCAGCAACTCCGCCTGGCAAATCTATCTGCA
AAGGCGGGCAGAGCGGGGCACCCCAAAGCCTCCAGGGCCCCCTGCTCAGCCCCCTGGCCC
GCCCAACGCCTCTAGTAACCCCGACCTCAGGAGGAGCGACCCTGGCTGGGAACGCTCGGA
CAGCGTCCTTCCAGCCTCTCACGGGCACCTCCCCCAGGCTGGCTCACTGGAGCGGAACCG
CGTGGGAGCCTCCTCCAAACTGGACAGCTCCCCTGTGCTCTCCCCTGGGAATAAAGCCAA
GCCCGACGACCACCGCTCACGGCCAGGCCGGCCCGCAGTGAGTCACCTGGTGGCAGGCAT
GGCCTGCCTCATCCTGGTTTGGGGCTTAGCCTCAGGGTGCTGGGTGTCAGGGGTGGGGTC
TCCGCTGATCTACCGAGAAGGGCTGTGGGGATGGAGGGACTGGTGCTTCTCATGGTGCTA
ACCTTTCCTAACCTCTCTCCTAACCTCTCTCCTAACCTCTCTTCTGGCTCTTTCTTCCCC
TGCGGCCCCTCCCAGAGCTATAAGCGAGCAATTGGTGAGGTTAGTGAGATGGGCCTGCTT
GTGGGAGCCCCTCCTGTCGCCCTGCTGGGGCGTCCCGGCACCCTTTGTCTACCTCCACCC
AGGCCCAGCTTCTCCCTGCCCCTCACGTGGCTCCTCCCTGCAGGACTTTGTGTTGCTGAA
AGAGCGGACTCTGGACGAGGCCCCTCGGCCTCCCAAGAAGGCCATGGACTACTCGTCGTC
CAGCGAGGAGGTGGAAAGCAGTGAGGACGACGAGGAGGAAGGCGAAGGCGGGCCAGCAGA
GGGGAGCAGAGATACCCCTGGGGGCCGCAGCGATGGGGATACAGACAGCGTCAGCACCAT
GGTGGTCCACGACGTCGAGGAGATCACCGGGACCCAGCCCCCATACGGGGGCGGCACCAT
GGTGGTCCAGCGCACCCCTGAAGAGGAGCGGAACCCGCTGCATGCTGACAGCAATGGGTA
CACAAACCTGCCTGACGTGGTCCAGCCCAGCCACTCACCCACCGAGAACAGCAAAGGCCA
AAGCCCACCCTCGAAGGATGGGAGTGGTGACTACCAGTCTCGTGGGCTGGTAAAGGCCCC
TGGCAAGAGCTCGTTCACGATGTTTGTGGATCTAGGGATCTACCAGCCTGGAGGCAGTGG
GGACAGCATCCCCATCACAGCCCTAGTGGGTGGAGAGGGCACTCGGCTCGACCAGCTGCA
GTACGACGTGAGGAAGGGTTCTGTGGTCAACGTGAATCCCACCAACACCCGGGCCCACAG
TGAGACCCCTGAGATCCGGAAGTACAAGAAGCGATTCAACTCCGAGATCCTCTGTGCAGC
CCTTTGGGGGGTCAACCTGCTGGTGGGCACGGAGAACGGGCTGATGTTGCTGGACCGAAG
TGGGCAGGACAAGGTGTATGGACTCATTGGGCGACGACGCTTCCAGCAGATGGATGTGCT
GGAGGGGCTCAACCTGCTCATCACCATCTCAGGGAAAAGGAACAAACTGCGGGTGTATTA
CCTGTCCTGGCTCCGGAACAAGATTCTGCACAATGACCCAGAAGTGGAGAAGAAGCAGGG
CTGGACCACCGTGGGGGACATGGAGGGCTGCGGGCACTACCGTGTTGTGAAATACGAGCG
GATTAAGTTCCTGGTCATCGCCCTCAAGAGCTCCGTGGAGGTGTATGCCTGGGCCCCCAA
ACCCTACCACAAATTCATGGCCTTCAAGTCCTTTGCCGACCTCCCCCACCGCCCTCTGCT
GGTCGACCTGACAGTAGAGGAGGGGCAGCGGCTCAAGGTCATCTATGGCTCCAGTGCTGG
CTTCCATGCTGTGGATGTCGACTCGGGGAACAGCTATGACATCTACATCCCTGTGCACAT
CCAGAGCCAGATCACGCCCCATGCCATCATCTTCCTCCCCAACACCGACGGCATGGAGAT
GCTGCTGTGCTACGAGGACGAGGGTGTCTACGTCAACACGTACGGGCGCATCATTAAGGA
TGTGGTGCTGCAGTGGGGGGAGATGCCTACTTCTGTGGCCTACATCTGCTCCAACCAGAT
AATGGGCTGGGGTGAGAAAGCCATTGAGATCCGCTCTGTGGAGACGGGCCACCTCGACGG
GGTCTTCATGCACAAACGAGCTCAGAGGCTCAAGTTCCTGTGTGAGCGGAATGACAAGGT
GTTTTTTGCCTCAGTCCGCTCTGGGGGCAGCAGCCAAGTTTACTTCATGACTCTGAACCG
TAACTGCATCATGAACTGGTGAAAGGGC

Mink3c protein sequence

1 MDVTEDEEEEIKQEINMLKKYSHHRNIATYYGAFIKKSPPGNDDQLWLVMEFCGAGSVTD
61 LVKNTKGNALKEDCIAYICREILRGLAHLHAHKVIHRDIKGQNVLLTENAEVKLVDFGVS
121 AQLDRTVGRRNTFIGTPYWMAPEVIACDENPDATYDYRSDIWSLGITAIEMAEGAPPLCD
181 MHPMRALFLIPRNPPPRLKSKKWSKKFIDFIDTCLIKTYLSRPPTEQLLKFPFIRDQPTE
241 RQVRIQLKDHIDRSRKKRGEKEETEYEYSGSEEEDDSHGEEGEPSSIMNVPGESTLRREF
301 LRLQQENKSNSEALKQQQQLQQQQRDPEAHIKHLLHQRQRRIEEQKEERRRVEEQQRRG
361 REQRKLQEKEQQRRLEDMQALRREEERRQAEREQEYKRKQLEEQRQSERLQRQLQQEHAY
421 LKSLQQQQQQQLQKQQQQQLLPGDRKPLYHYGRGMNPADKPAWAREVEERTRMNKQQNS
481 PLAKSKPGSTGPEPPIPQASPGPPGPLSQTPPMQRPVEPQEGPHKSLVAHRVPLKPYAAP

Fig. 1

Sheet 3

541 VPRSQSLQDQPTRNLAAFPASHDPDPAIPAPTATPSARGAVIRQNSDPTSEGPGPSPNPP
601 AWVRPDNEAPPKVPQRTSSIATALNTSGAGGSRPAQAVRARPRSNSAWQIYLQRRAERGT
661 PKPPGPPAQPPGPPNASSNPDLRRSDPGWERSDSVLPASHGHLPQAGSLERNRVGASSKL
721 DSSPVLSPGNKAKPDDHRSRPGRPADFVLLKERTLDEAPRPPKKAMDYSSSSEEVESSED
781 DEEEGEGGPAEGSRDTPGGRDGDTDSVSTMVVHDVEEITGTQPPYGGGTMVVQRTPEEER
841 NLLHADSNGYTNLPDVVQPSHSPTENSKGQSPPSKDGSGDYQSRGLVKAPGKSSFTMFVD
901 LGIYQPGGSGDSIPITALVGGEGTRLDQLQYDVRKGSVVNVNPTNTRAHSETPEIRKYKK
961 RFNSEILCAALWGVNLLVGTENGLMLLDRSGQGKVYGLIGRRRFQQMDVLEGLNLLITIS
1021 GKRNKLRVYYLSWLRNKILHNDPEVEKKQGWTTVGDMEGCGHYRVVKYERIKFLVIALKS
1081 SVEVYAWAPKPYHKFMAFKSFADLPHRPLLVDLTVEEGQRLKVIYGSSAGFHAADVDSGN
1141 SYDIYIPVHIQSQITPHAIIFLPNTDGMEMLLCYEDEGVYVNTYGRIIKDVVLQWGEMPT
1201 SVAYICSNQIMGWGEKAIEIRSVETGHLDGVFMHKRAQRLKFLCERNDKVFFASVRSGGS
1261 SQVYFMTLNRNCIMNW

Mink3c nucleotide sequence

ACCATTCTGGAAGCTCCCTAGAATCTCCTGGAATGCT
TAATGGACCTTTCCAGCACCGAAATTCAAGAATTATGACTCATCGGTCAGCAGAAAAGAC
CCTGCTGGGATCTTTGAGCTTGTGGAGGTGGTCGGCAATGGAACCTACGGACAGGTGTAC
AAGGGTCGGCATGTCAAGACGGGGCAGCTGGCTGCCATCAAGGTCATGGATGTCACGGAG
GACGAGGAGGAAGAGATCAAACAGGAGATCAACATGCTGAAAAAGTACTCTCACCACCGC
AACATCGCCACCTACTACGGAGCCTTCATCAAGAAGAGCCCCCCGGGAAACGATGACCAG
CTCTGGCTGGTGATGGAGTTCTGTGGTGCTGGTTCAGTGACTGACCTGGTAAAGAACACA
AAAGGCAACGCCCTGAAGGAGGACTGTATCGCCTATATCTGCAGGGAGATCCTCAGGGGT
CTGGCCCATCTCCATGCCCACAAGGTGATCCATCGAGACATCAAGGGGCAGAATGTGCTG
CTGACAGAGAATGCTGAGGTCAAGCTAGTGGATTTTGGGGTGAGTGCTCAGCTGGACCGC
ACCGTGGGCAGACGGAACACTTTCATTGGGACTCCCTACTGGATGGCTCCAGAGGTCATC
GCCTGTGATGAGAACCCTGATGCCACCTATGATTACAGGAGTGATATTTGGTCTCTAGGA
ATCACAGCCATCGAGATGGCAGAGGGAGCCCCCCCTCTGTGTGACATGCACCCCATGCGA
GCCCTCTTCCTCATTCCTCGGAACCCTCCGCCCAGGCTCAAGTCCAAGAAGTGGTCTAAG
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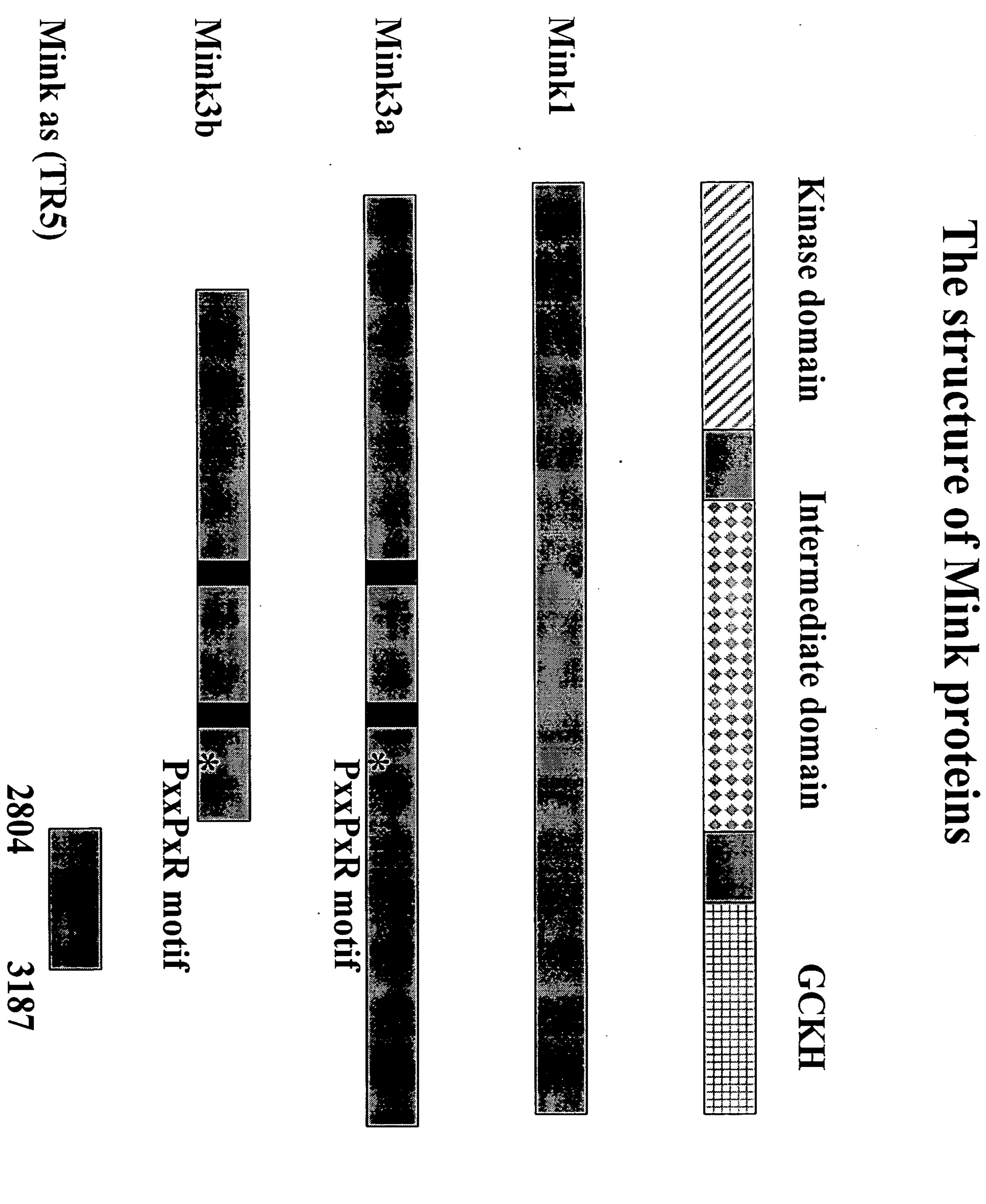
CAGCTTAAGGACCACATTGACCGATCCCGGAAGAAGCGGGGTGAGAAAGAGGAGACAGAA
TATGAGTACAGCGGCAGCGAGGAGGAAGATGACAGCCATGGAGAGGAAGGAGAGCCAAGC
TCCATCATGAACGTGCCTGGAGAGTCGACTCTACGCCGGGAGTTTCTCCGGCTCCAGCAG
GAAAATAAGAGCAACTCAGAGGCTTTAAAACAGCAGCAGCAGCTGCAGCAGCAGCAGCAG
CGAGACCCCGAGGCACACATCAAACACCTGCTGCACCAGCGGCAGCGGCGCATAGAGGAG
CAGAAGGAGGAGCGGCGCCGCGTGGAGGAGCAACAGCGGCGGGGGCGGGAGCAGCGGAAG
CTGCAGGAGAAGGAGCAGCAGCGGCGGCTGGAGGACATGCAGGCTCTGCGGCGGGAGGAG
GAGCGGCGGCAGGCGGAGCGTGAGCAGGAATACAAGCGGAAGCAGCTGGAGGAGCAGCGG
CAGTCAGAACGTCTCCAGAGGCAGCTGCAGCAGGAGCATGCCTACCTCAAGTCCCTGCAG
CAGCAGCAACAGCAGCAGCAGCTTCAGAAACAGCAGCAGCAGCAGCTCCTGCCTGGGGAC
AGGAAGCCCCTGTACCATTATGGTCGGGGCATGAATCCCGCTGACAAACCAGCCTGGGCC
CGAGAGGTAGAAGAGAGAACAAGGATGAACAAGCAGCAGAACTCTCCCTTGGCCAAGAGC
AAGCCAGGCAGCACGGGGCCTGAGCCCCCCATCCCCCAGGCCTCCCCAGGGCCCCCAGGA
CCCCTTTCCCAGACTCCTCCTATGCAGAGGCCGGTGGAGGCCCAGGAGGGACCGCACAAG
AGCCTGGTGGCACACCGGGTCCCACTGAAGCCATATGCAGCACCTGTACCCCGATCCCAG
TCCCTGCAGGACCAGCCCACCCGAAACCTGGCTGCCTTCCCAGCCTCCCATGACCCCGAC
CCTGCCATCCCCGCACCCACTGCCACGCCCAGTGCCCGAGGAGCTGTCATCCGCCAGAAT
TCAGACCCCACCTCTGAAGGACCTGGCCCCAGCCCGAATCCCCCAGCCTGGGTCCGCCCA
GATAACGAGGCCCCACCCAAGGTGCCTCAGAGGACCTCATCTATCGCCACTGCCCTTAAC
ACCAGTGGGGCCGGAGGGTCCCGGCCAGCCCAGGCAGTCCGTGCCAGACCTCGCAGCAAC
TCCGCCTGGCAAATCTATCTGCAAAGGCGGGCAGAGCGGGGCACCCCAAAGCCTCCAGGG
CCCCCTGCTCAGCCCCCTGGCCCGCCCAACGCCTCTAGTAACCCCGACCTCAGGAGGAGC
GACCCTGGCTGGGAACGCTCGGACAGCGTCCTTCCAGCCTCTCACGGGCACCTCCCCCAG
GCTGGCTCACTGGAGCGGAACCGCGTGGGAGCCTCCTCCAAACTGGACAGCTCCCCTGTG
CTCTCCCCTGGGAATAAAGCCAAGCCCGACGACCACCGCTCACGGCCAGGCCGGCCCGCA
GACTTTGTGTTGCTGAAAGAGCGGACTCTGGACGAGGCCCCTCGGCCTCCCAAGAAGGCC
ATGGACTACTCGTCGTCCAGCGAGGAGGTGGAAAGCAGTGAGGACGACGAGGAGGAAGGC
GAAGGCGGGCCAGCAGAGGGGAGCAGAGATACCCCTGGGGGCCGCGATGGGGATACAGAC
AGCGTCAGCACCATGGTGGTCCACGACGTCGAGGAGATCACCGGGACCCAGCCCCCATAC
GGGGGCGGCACCATGGTGGTCCAGCGCACCCCTGAAGAGGAGCGGAACCTGCTGCATGCT
GACAGCAATGGGTACACAAACCTGCCTGACGTGGTCCAGCCCAGCCACTCACCCACCGAG
AACAGCAAAGGCCAAAGCCCACCCTCGAAGGATGGGAGTGGTGACTACCAGTCTCGTGGG
CTGGTAAAGGCCCCTGGCAAGAGCTCGTTCACGATGTTTGTGGATCTAGGGATCTACCAG
CCTGGAGGCAGTGGGGACAGCATCCCCATCACAGCCCTAGTGGGTGGAGAGGGCACTCGG
CTCGACCAGCTGCAGTACGACGTGAGGAAGGGTTCTGTGGTCAACGTGAATCCCACCAAC

Fig. 1

Sheet 4

ACCCGGGCCCACAGTGAGACCCCTGAGATCCGGAAGTACAAGAAGCGATTCAACTCCGAG
ATCCTCTGTGCAGCCCTTTGGGGGGTCAACCTGCTGGTGGGCACGGAGAACGGGCTGATG
TTGCTGGACCGAAGTGGGCAGGGCAAGGTGTATGGACTCATTGGGCGGCGACGCTTCCAG
CAGATGGATGTGCTGGAGGGGCTCAACCTGCTCATCACCATCTCAGGGAAAAGGAACAAA
CTGCGGGTGTATTACCTGTCCTGGCTCCGGAACAAGATTCTGCACAATGACCCAGAAGTG
GAGAAGAAGCAGGGCTGGACCACCGTGGGGGACATGGAGGGCTGCGGGCACTACCGTGTT
GTGAAATACGAGCGGATTAAGTTCCTGGTCATCGCCCTCAAGAGCTCCGTGGAGGTGTAT
GCCTGGGCCCCCAAACCCTACCACAAATTCATGGCCTTCAAGTCCTTTGCCGACCTCCCC
CACCGCCCTCTGCTGGTCGACCTGACAGTAGAGGAGGGGCAGCGGCTCAAGGTCATCTAT
GGCTCCAGTGCTGGCTTCCATGCTGCGGATGTCGACTCGGGGAACAGCTATGACATCTAC
ATCCCTGTGCACATCCAGAGCCAGATCACGCCCCATGCCATCATCTTCCTCCCCAACACC
GACGGCATGGAGATGCTGCTGTGCTACGAGGACGAGGGTGTCTACGTCAACACGTACGGG
CGCATCATTAAGGATGTGGTGCTGCAGTGGGGGGAGATGCCTACTTCTGTGGCCTACATC
TGCTCCAACCAGATAATGGGCTGGGGTGAGAAAGCCATTGAGATCCGCTCTGTGGAGACG
GGCCACCTCGACGGGGTCTTCATGCACAAACGAGCTCAGAGGCTCAAGTTCCTGTGTGAG
CGGAATGACAAGGTGTTTTTGCCTCAGTCCGCTCTGGGGGCAGCAGCCAAGTTTACTTC
ATGACTCTGAACCGTAACTGCATCATGAACTGG**TGA**

Fig. 1
Sheet 5



The structure of Mink proteins
Kinase domain
Intermediate domain
GCKH
Mink1
Mink3a
Mink3b
Mink as (TR5)
PxxPxR motif
PxxPxR motif
2804
3187

Fig. 2

TR5 inhibits the transcriptional activity of AP1-luciferase reporter gene in 293 cells

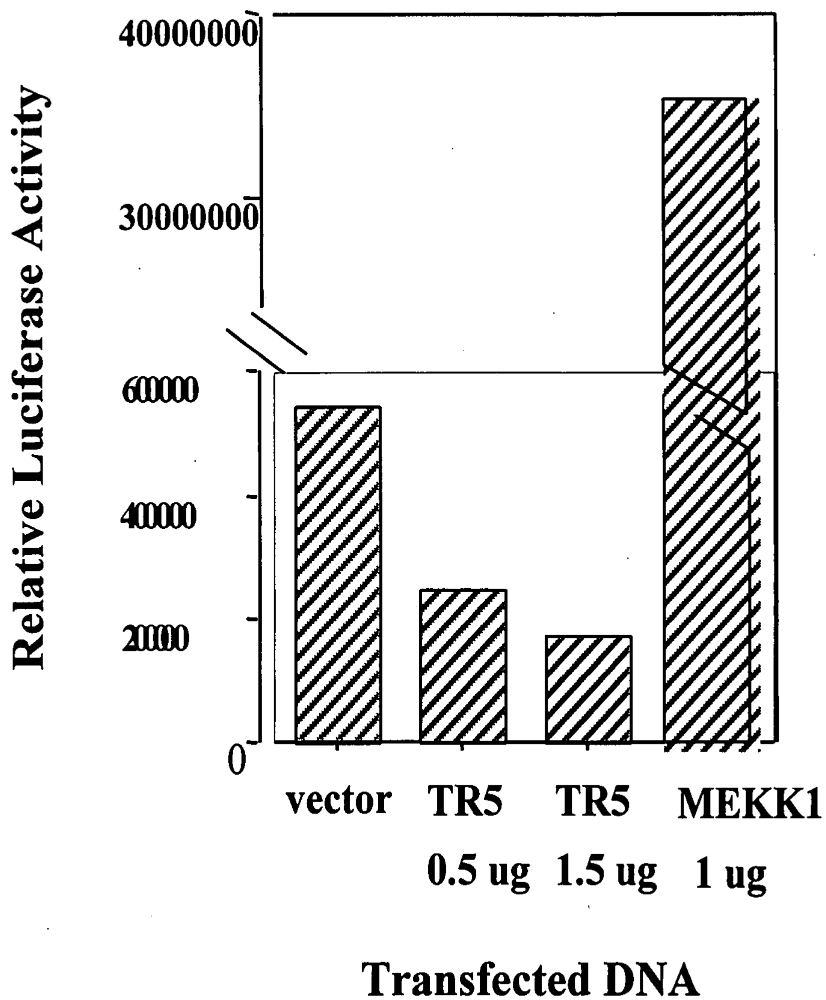


Fig. 3

Signal pathways regulating Taxol-mediated apoptosis

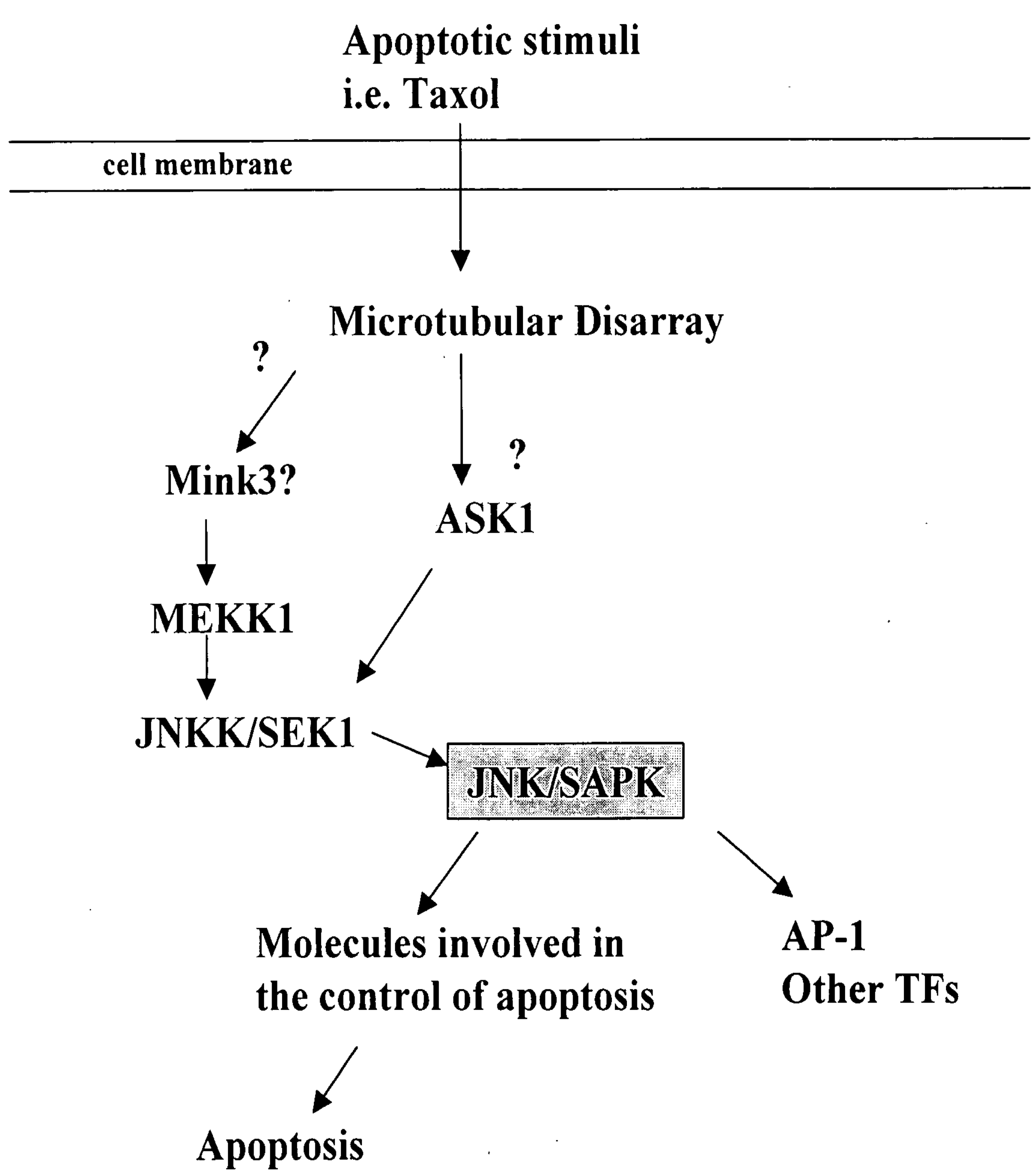


Fig. 4

The signal transduction of MAPK pathways

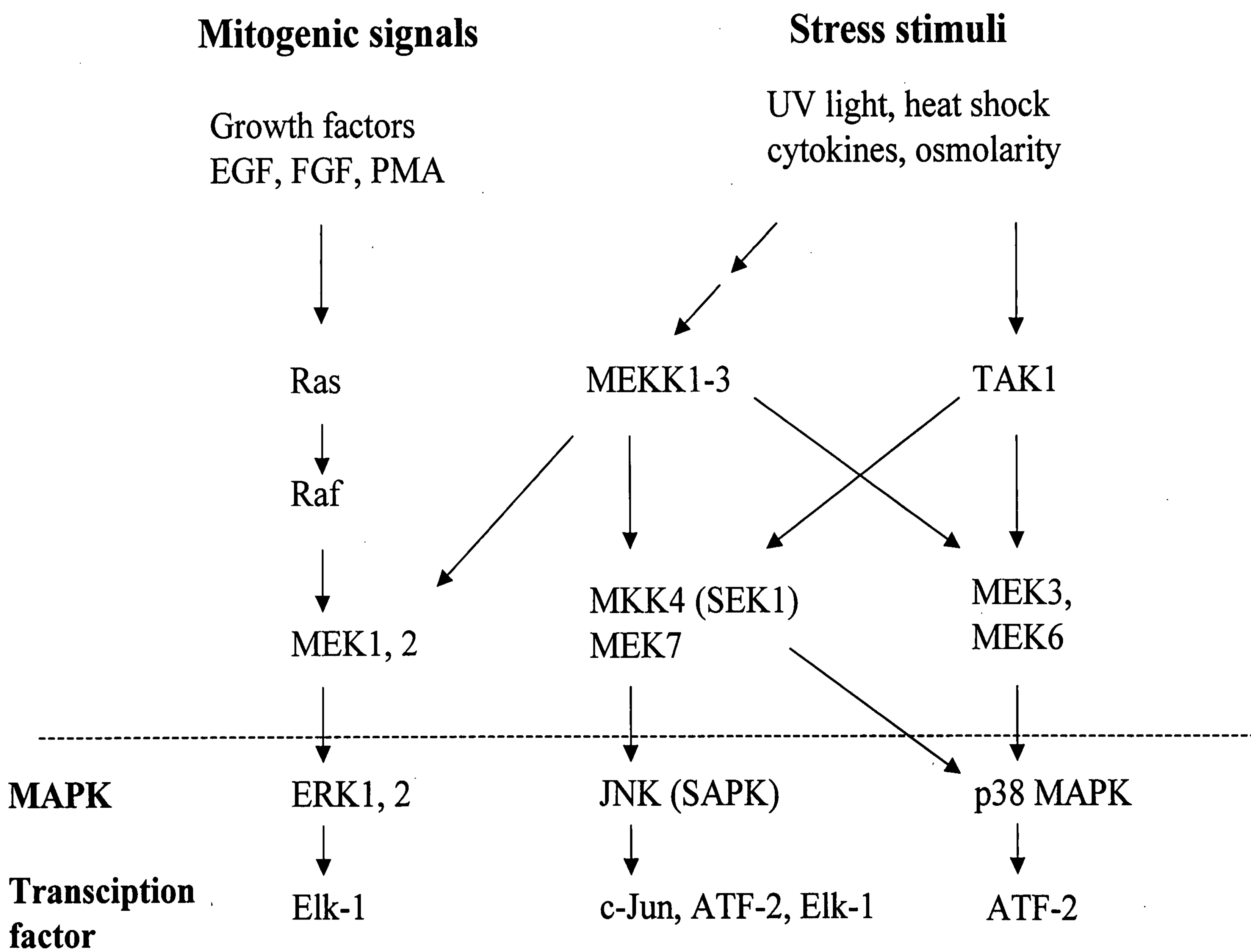


Fig. 5

The MAPK signaling pathway

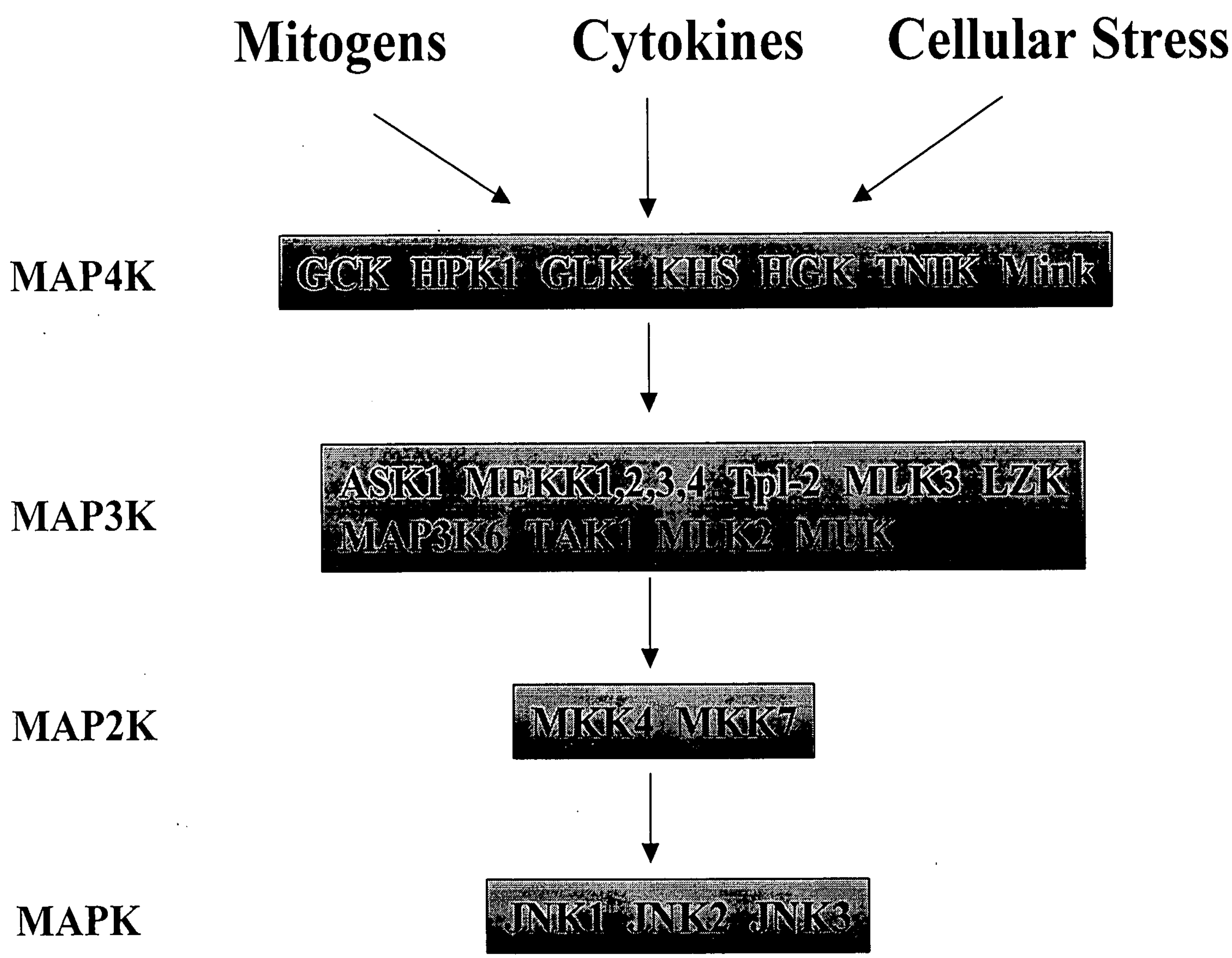


Fig. 6

Expression antisense of Mink3 confers Taxol-resistance in Hela cells

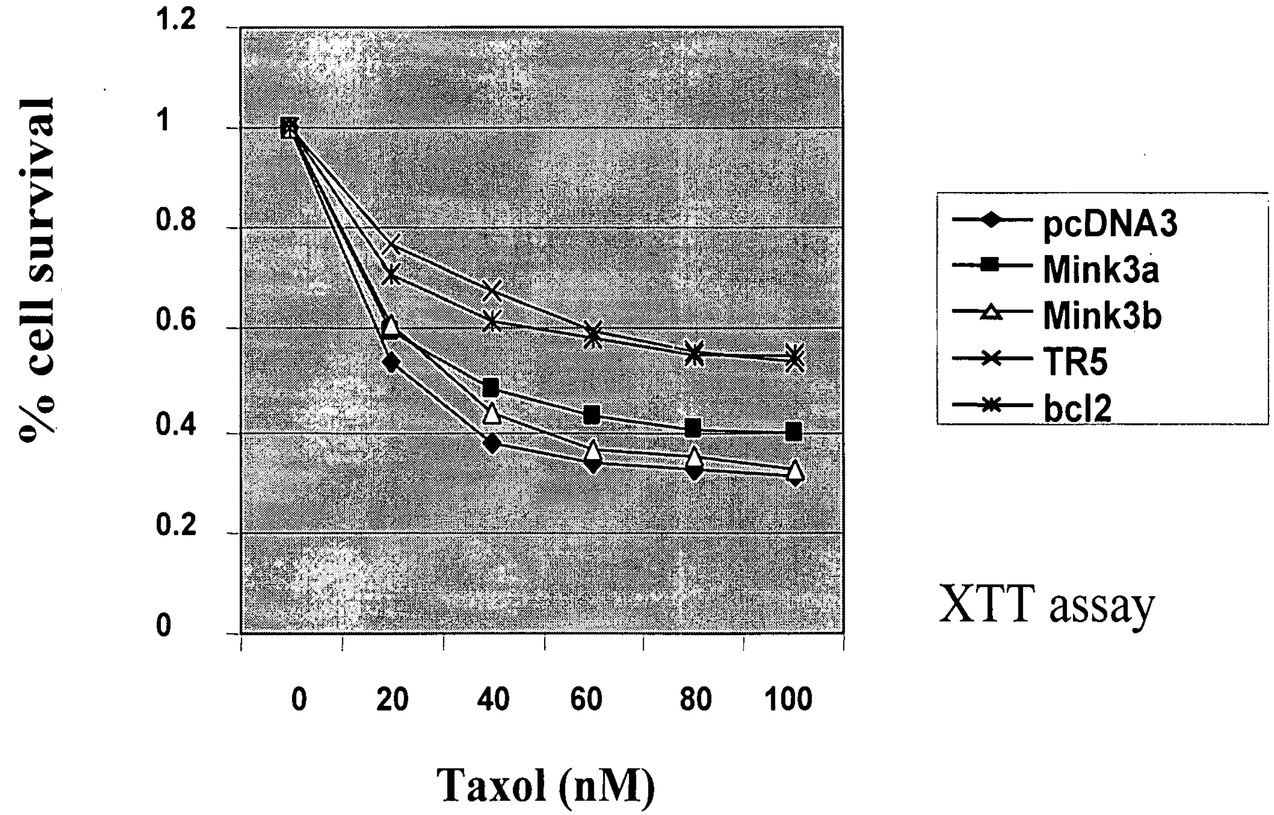


Fig. 7

Expression of Mink3a in A549 cells slows down the cell growth in low serum medium

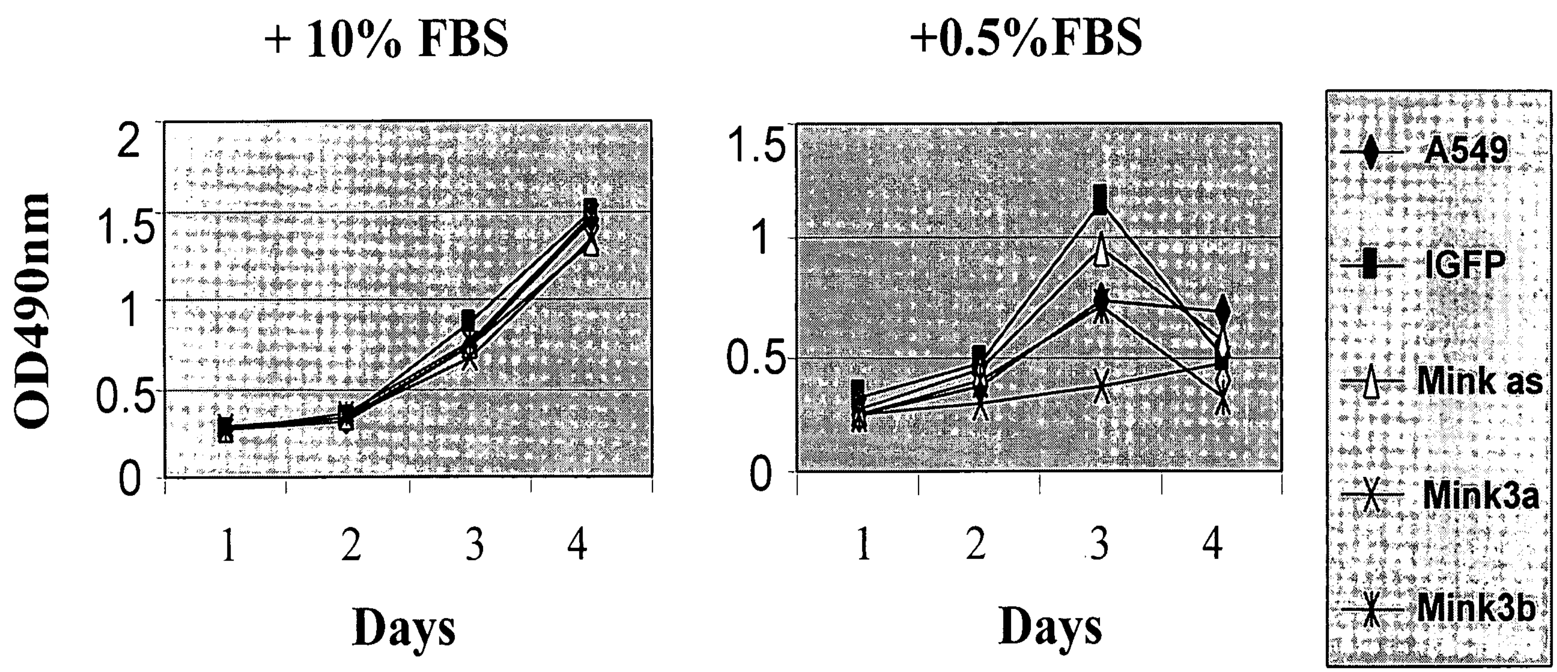


Fig. 8

Expression of antisense of Mink inhibits EGF-mediated induction of ERK signal pathway

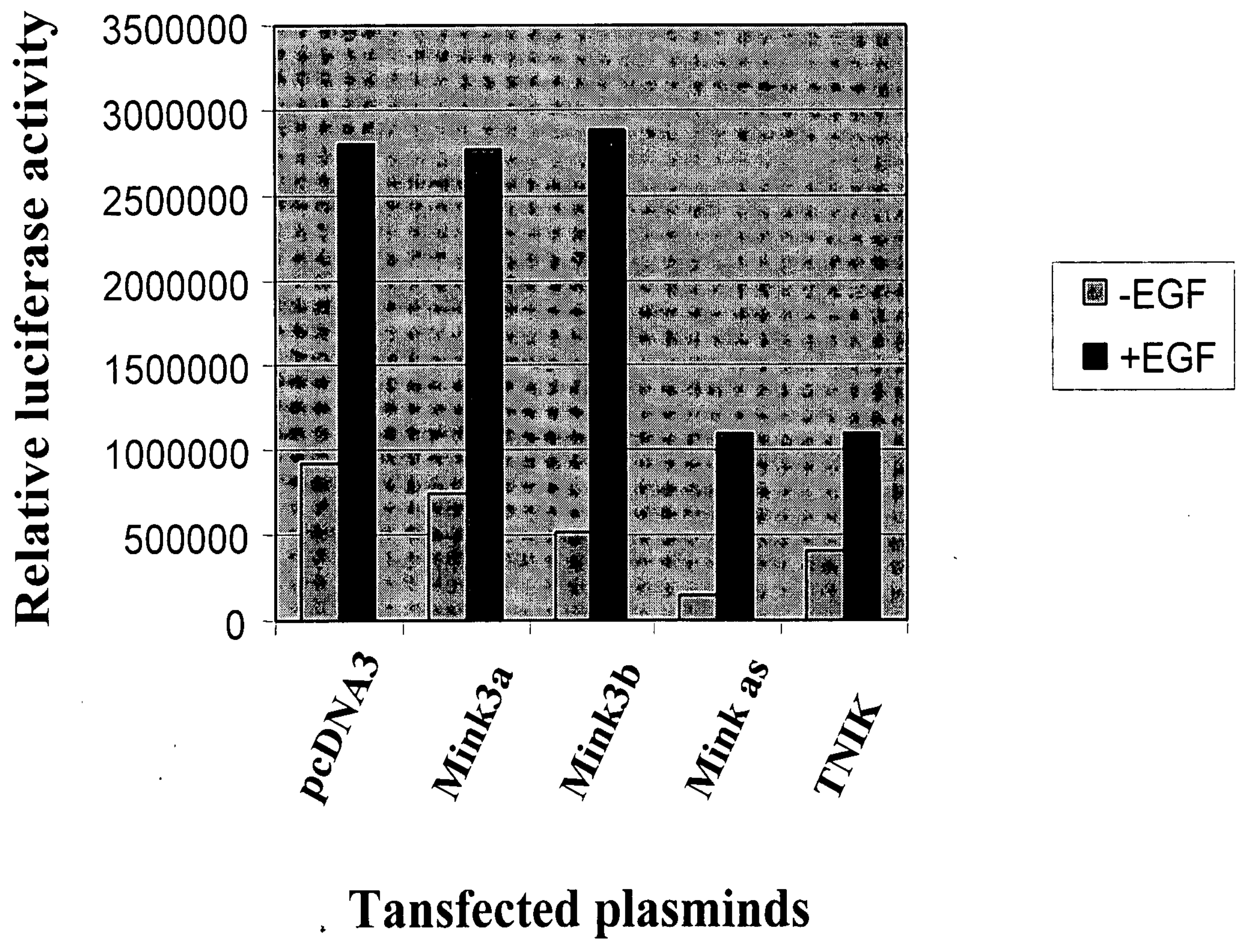


Fig. 9

TR5 and Bcl2 block Taxol-induced cleavage of Rb protein

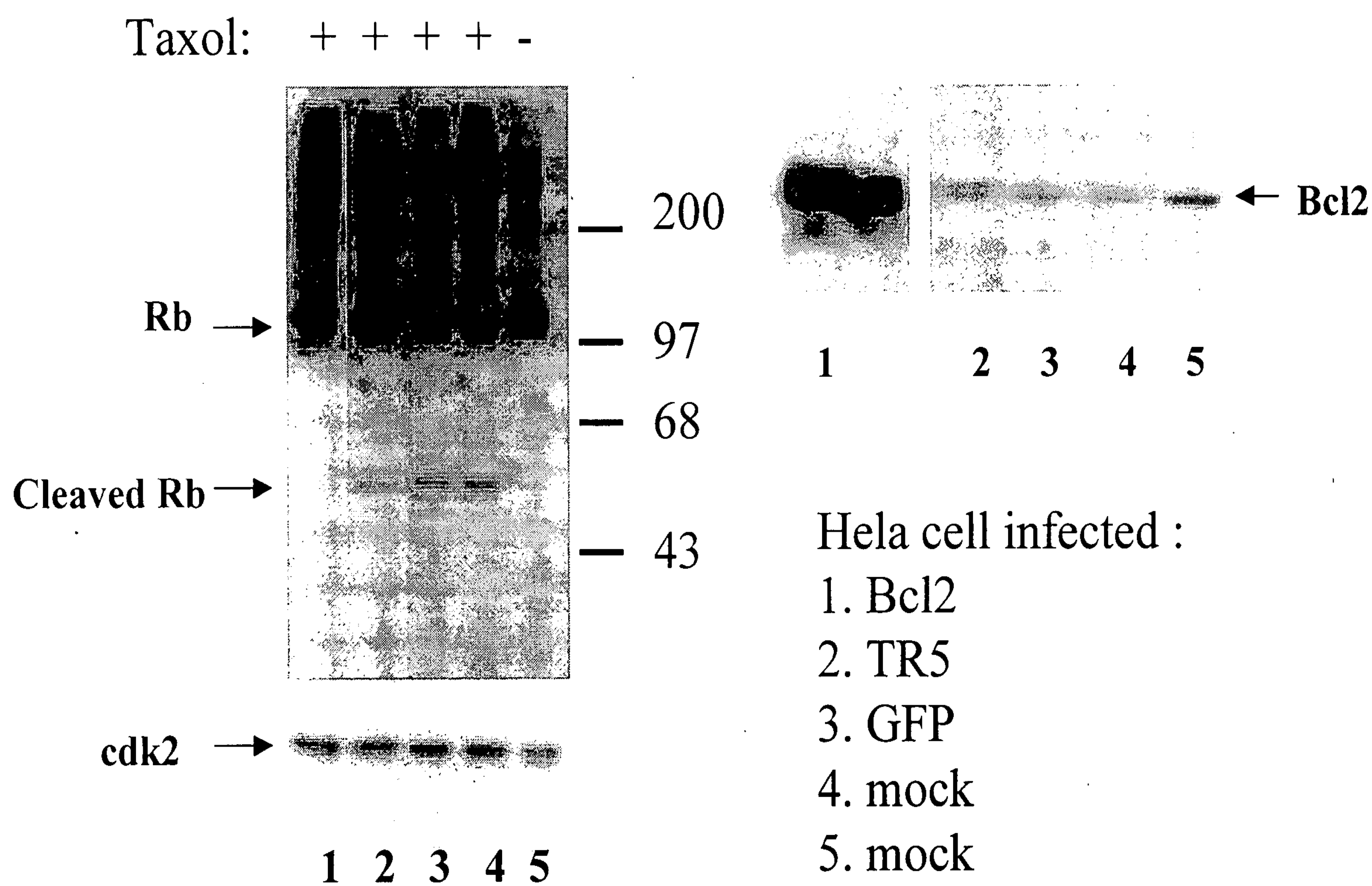


Fig. 10

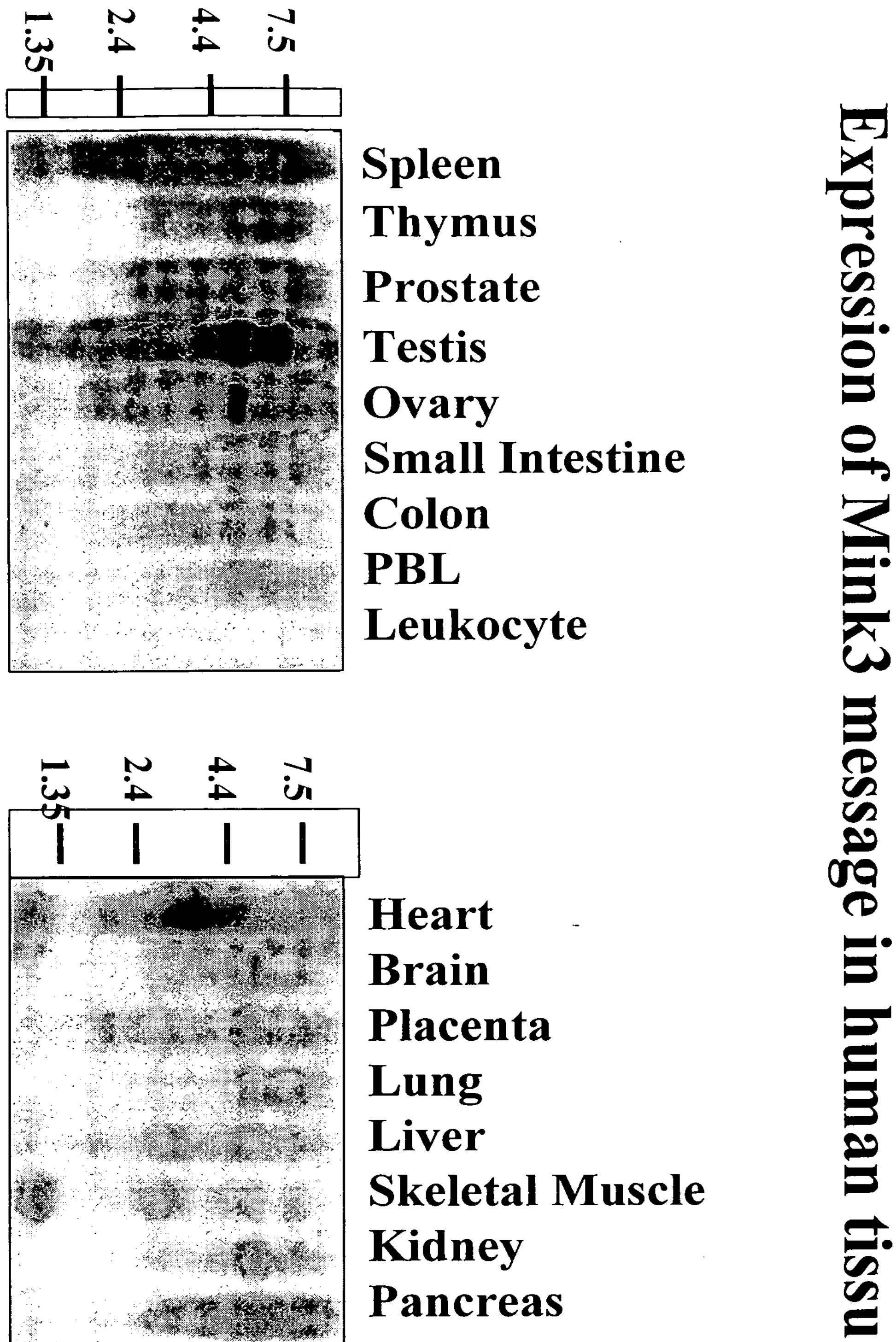

Expression of Mink3 message in human tissue
1.35
2.4
4.4
7.5
Spleen
Thymus
Prostate
Testis
Ovary
Small Intestine
Colon
PBL
Leukocyte
1.35
2.4
4.4
7.5
Heart
Brain
Placenta
Lung
Liver
Skeletal Muscle
Kidney
Pancreas

Fig. 11

Expression of Mink3 message in tumor cell lines

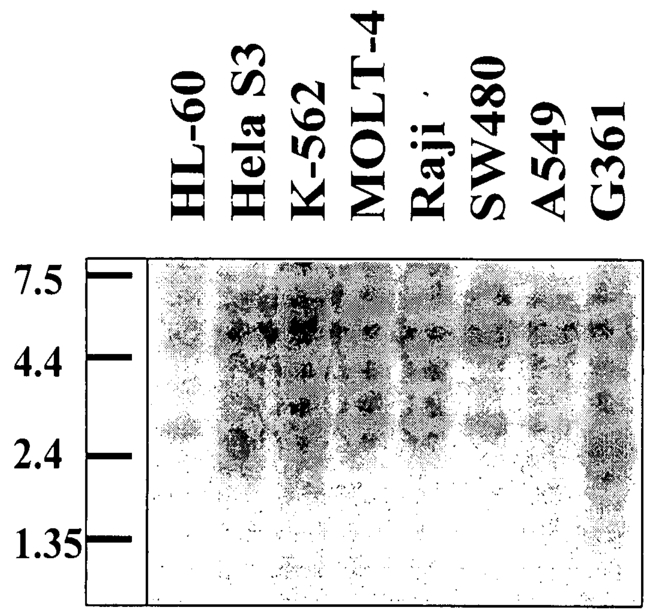


Fig. 12

Mink3a activates JNK and ERK pathways

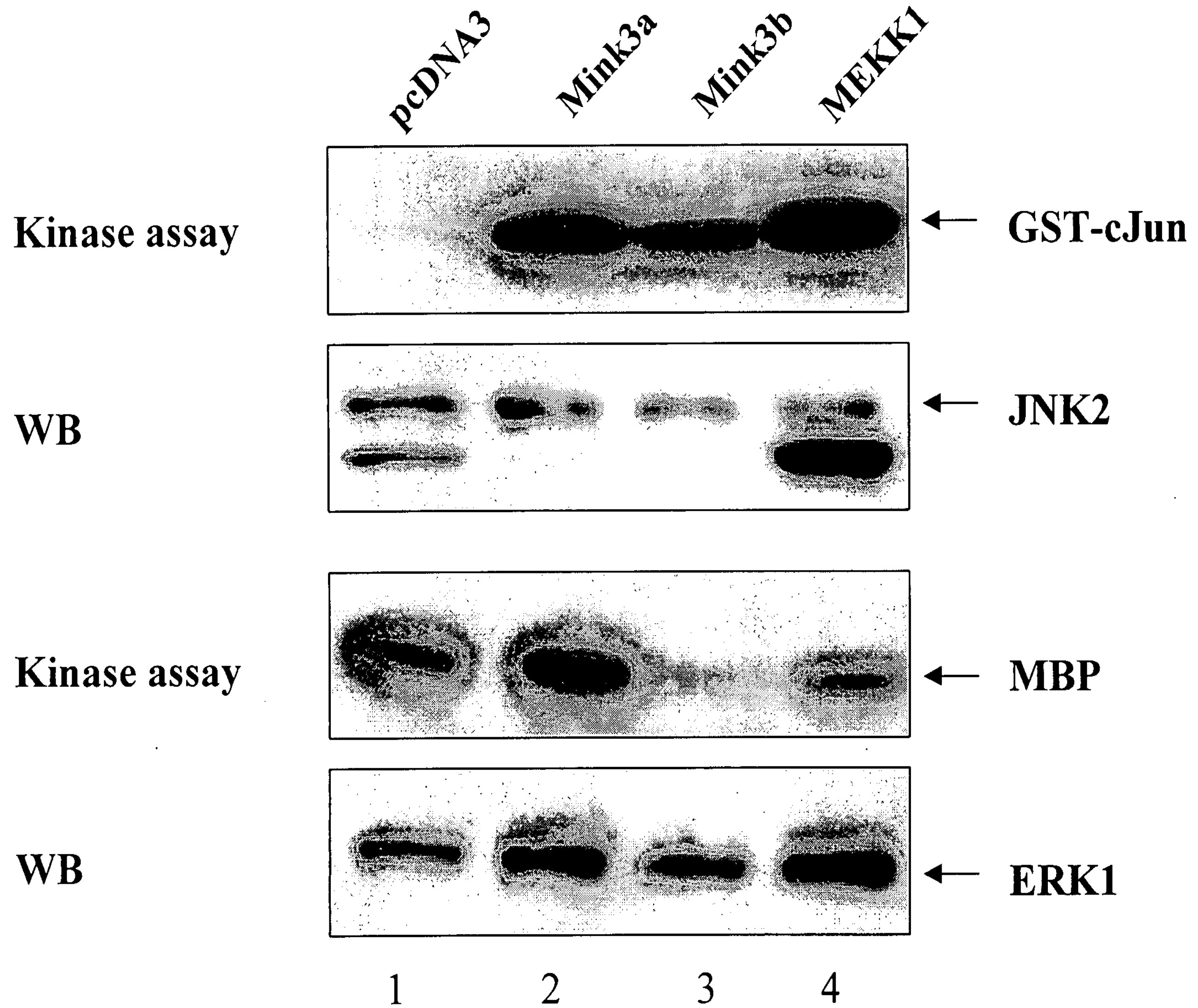


Fig. 13

Expression of Mink3a in MDA-MB-231 cells causes the cellular morphological change

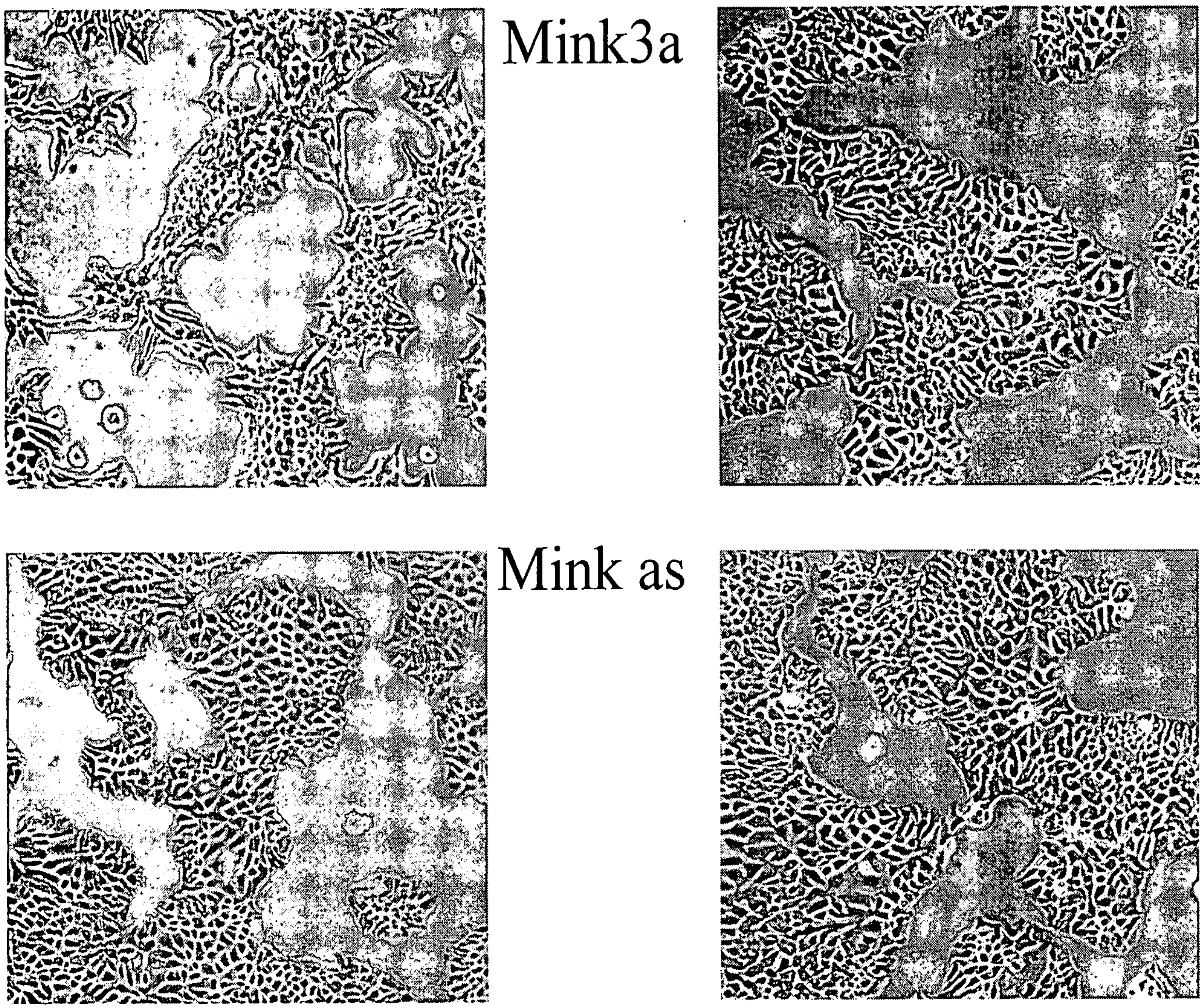
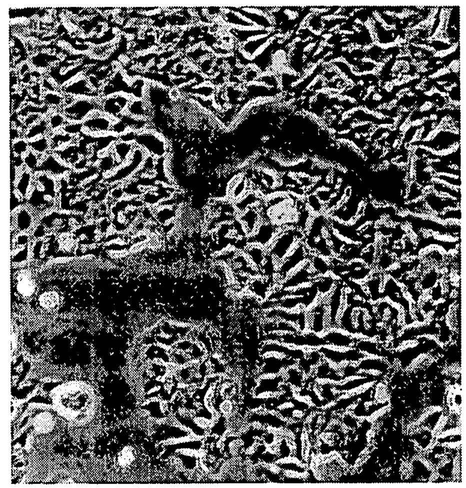


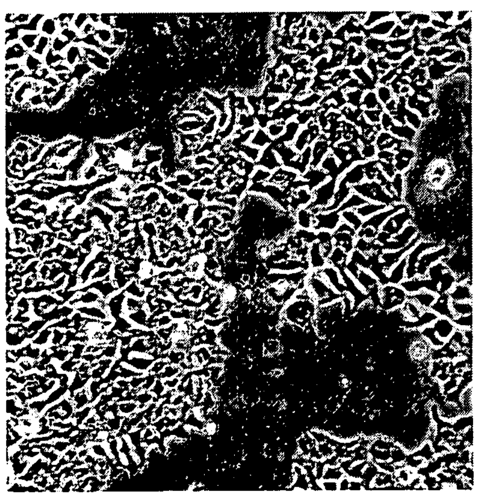
Fig. 14

MEK inhibitor restore the morphology of Mink3a infected MDA-MB-231 cells

Mink3a



Mink3a
+PD98059



MDA-MB-231

Fig. 15